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Norris et al.

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(54) **SYSTEMS AND METHODS FOR SWITCHING BETWEEN AUTONOMOUS AND MANUAL OPERATION OF A VEHICLE**

(58) **Field of Classification Search** 701/2, 701/23, 41, 42, 43, 70; 180/400, 404, 443, 180/444, 446
See application file for complete search history.

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(57) **ABSTRACT**

Systems and methods for switching between autonomous and manual operation of a vehicle are described. A mechanical control system can receive manual inputs from a mechanical operation member to operate the vehicle in manual mode. An actuator can receive autonomous control signals generated by a controller. When the actuator is engaged, it operates the vehicle in an autonomous mode, and when disengaged, the vehicle is operated in manual mode. Operating the vehicle in an autonomous mode can include automatically controlling steering, braking, throttle, and transmission. A system may also allow the vehicle to be operated via remote command.

29 Claims, 22 Drawing Sheets

